

fact sheet: Cocaine

What is cocaine?

Cocaine is an extremely powerful central nervous system stimulant or “upper.” Cocaine acts directly on the brain’s “pleasure centers,” causing changes in brain activity and, by allowing a brain chemical called dopamine to remain active longer than usual, it triggers cravings for more of the drug.

Cocaine is often referred to by many common “street” names. Among these are “c,” “coke,” “snow,” “nose candy,” “blow,” “rock” and “toot.”

Prevention Primer: An Encyclopedia of Alcohol, Tobacco and Other Drug Prevention Terms. 1994. Rockville, Md.: U.S. Department of Health and Human Services.

How many forms of cocaine are there?

Cocaine is available in two primary forms: (1) cocaine hydrochloride; and (2) cocaine alkaloid. Both are extracted from the Central and South American coca plant.

Cocaine hydrochloride is an odorless white powder. It is usually snorted (intranasal use) or injected (intravenous [IV] use).

Cocaine alkaloid is not water soluble. It is made into freebase or crack and is smoked, resulting in a faster, more intense high than injecting or snorting.

With freebase, the user converts the cocaine to a pure base by removing the hydrochloride salt and some of the cutting agents. Creating freebase is dangerous because of the chemicals used during the process.

Crack has been called a dealer’s dream and a user’s nightmare because the dealer performs the extraction for the user. Crack comes in a ready-to-smoke form and produces effects identical to freebase. Initially, crack is affordable for almost anyone. However, it quickly becomes unaffordable because crack is very addictive, and large amounts of the drug are needed to maintain the user’s habit as tolerance for the drug increases.

Crack resembles soap shavings. It can be lump shaped (“rock”) or in three-inch sticks with ridges (“French fries” or “teeth”). It is sold in small vials, folding papers, heavy tinfoil and envelopes.

Crack became a serious problem in this country around 1985. Before then, cocaine smokers were using freebase.

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Gold, M.S. 1984. *800-Cocaine*. New York: Bantam Books.

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Why do people use cocaine?

People use cocaine to change their moods and mental states by altering brain function. The cocaine “high” consists of a state of euphoria with feelings of increased energy, confidence, mental alertness and sexual arousal. The drug stimulates neurotransmitters (the body’s chemical messengers that send information to the brain). In the early “honeymoon” stage of cocaine use there are a lot of positive feelings and few negative effects.

As use increases, negative effects — including restlessness, anxiety, agitation, irritability and paranoia — steadily intensify. The highs are no longer intense, and when the users “come down” they no longer return to a pre-cocaine state, but experience increasing levels of depression. This “crash” only increases the user’s desire for more cocaine in a futile attempt to return to “normal.” By this point, the body’s “feel-good” neurotransmitters are almost used up.

In *all* chronic users, a point is reached where cocaine no longer produces any pleasurable sensations. Cocaine use continues, however, in a futile attempt to capture that elusive high. At this point, nothing — not the drug or any of life’s ordinary pleasures — is rewarding because all of the brain’s neurotransmitters are gone.

Washton, A.M. 1989. *Cocaine Addiction*. New York: W.W. Norton & Co.

How common is cocaine use?

In 2000, 11 percent of the U.S. population (25 million out of 223 million) reported using cocaine at least once. Of these, 1.5 percent (3.3 million) reported use in the past year, and 0.5 percent (1.2 million) reported current use (defined as use in the past 30 days). Furthermore, 2.4 percent (5.3 million) reported using crack at some time in their lives. Reported use was most common among

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males ages 26 to 34. The number of cocaine users is declining; however, more of the current users are heavy abusers than in the past.

A little closer to home, figures from more than 10,000 representative households in a 2001 South Carolina household survey show that an estimated 5.9 percent of respondents had used cocaine at least once in their lives; 0.8 percent had used cocaine in the past year; and 0.3 percent had used cocaine in the past 30 days. Males ages 26 to 34 are the most frequent users. Since 1993, cocaine use among South Carolina adolescents has decreased slightly. However, approximately 2 percent of young people in South Carolina still report using the drug regularly.

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National Household Survey on Drug Abuse. 2001. Chicago, Ill: Substance Abuse and Mental Health Services Administration.
South Carolina Treatment Needs Assessment Adult Household Survey Summary Report. 2001. Columbia, S.C.: South Carolina Department of Alcohol and Other Drug Abuse Services.
The South Carolina Survey, School Year 2002. 2002. Columbia, S.C.: South Carolina Department of Alcohol and Other Drug Abuse Services.

Is cocaine addictive?

Cocaine is very addictive. Although cocaine does not cause the physical withdrawal symptoms often seen during withdrawal from other drugs, it does cause extreme depression. Treatment professionals see addicts attempting to kill themselves during withdrawal, and suicide is a significant withdrawal symptom. Cocaine causes a chemically induced physical change in the brain that is expressed through psychological symptoms including profound depression, paranoia, irritability, loss of energy and an intense cocaine craving.

A conservative estimate of crack addiction is 40 percent, or for every 10 people who try crack, four will become addicts. When compared with other drugs — such as alcohol, which has an addiction rate of approximately 10 percent — this number is very high.

Gawin, F.H. 1989. Cocaine abuse and addiction. *Journal of Family Practice*. 29(20):193-196.
Gold, M.S. 1984. *800-Cocaine*. New York: Bantam Books.
Medzerian, G. 1991. *Crack: Treating Cocaine Addiction*. Blue Ridge Summit, Pa.: Tab Books.

Why is cocaine so addictive?

Cocaine addiction is related to four factors: (1) speed of onset; (2) degree of pleasure associated with use; (3) degree of pain and discomfort associated with discontinued use; and (4) duration of the drug's effect.

Speed of onset refers to how quickly a drug works: the shorter the time, the more addictive the substance. For example, it takes about three minutes to feel the

effects of alcohol, while the effects of cocaine hydrochloride are felt in 30 seconds, and the effects of crack and freebase are felt in six seconds.

The *degree of pleasure* associated with using the drug involves increased enjoyable sensations and masked painful ones. The cocaine high is very intense.

Though not physical, the *degree of psychological pain and discomfort* associated with discontinued cocaine use is intense. The “crash” is as low as the pleasurable state is high.

The *duration of the drug's effects* is important with cocaine in general, but especially with crack. A crack “high” lasts only a few minutes, meaning the behavior must be repeated rapidly for lasting effects. The more often the behavior is repeated, the more quickly it becomes a habit. Experience has shown that it is difficult to remain a “recreational” cocaine user without becoming addicted.

Medzerian, G. 1991. *Crack: Treating Cocaine Addiction*. Blue Ridge Summit, Pa.: Tab Books (citing Washton, A. Presented at the SECAD Conference, Atlanta, Ga., 1985).
Miller, N.S., Gold, M.S., Millman, R.B. 1989. Cocaine: general characteristics, abuse and addiction. *New York State Journal of Medicine*. 89(7):390-394.
Washton, A.M. 1989. *Cocaine Addiction*. New York: W.W. Norton & Co.

Do cocaine addicts use the drug every day?

As addiction develops, the number of days of actual use may decrease as the user often shifts toward binge use. Users become so addicted they can only stop using when they run out of cocaine. Abusers average one to three binges per week, with the typical binge lasting eight to 24 hours. During the binge, the addict's only interest is cocaine. Sleep, food, sex, other people and life's responsibilities become unimportant. What begins as a party drug eventually isolates its users socially. Following a binge, the abuser may go from one to five days without cocaine.

Gawin, F.H. 1989. Cocaine abuse and addiction. *Journal of Family Practice*. 29(2):193-197.

Can cocaine cause medical problems?

Medical complications associated with cocaine use vary according to the amount and purity of cocaine used, the method by which it is taken and the individual.

Chest pain is the most frequent cocaine-associated complaint. Most of cocaine's toxic effects are directed at the heart and blood vessels, resulting in blockages of blood circulation (infarctions), abnormalities in the

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heart's rhythm (arrhythmias) and strokes. Heart stoppages (cardiac arrests) and seizures also have been linked with cocaine use. Sudden death after cocaine use is usually related to cardiac arrhythmia, epilepsy or brain hemorrhage. Other cardiac risk factors are sometimes difficult to identify — especially because most cocaine users are also tobacco smokers (91 percent in one study).

The risk of fatal injuries also increases because cocaine use can cause poor judgment, hyperactivity and violence. In a 1995 New York City study, over 25 percent of people who died from a fatal injury were recent cocaine users. Of these injuries, one-third were accidental drug overdoses and two-thirds were homicides, suicides, motor vehicle crashes and falls.

Drug Abuse and Drug Abuse Research. 1991. Rockville, Md.: National Institute on Drug Abuse.
Hollander, J.E., et al. 1995. Cocaine-associated myocardial infarction. *Archives of Internal Medicine*. 155:1081-1086.
Levine, S.R., Welch, K.M.A. 1988. Cocaine and stroke. *Stroke*. 19(6):779-782.
Marzuk, P.M., et al. 1995. Fatal injuries after cocaine use as a leading cause of death among young adults in New York City. *New England Journal of Medicine*. 332(26):1753-1757.
Warner, E.A. 1995. Is your patient using cocaine? *Postgraduate Medicine*. 98(2):173-180.

Is cocaine a sexual stimulant?

Some users report heightened desire and performance; others report no effect. However, with repeated use, the drug causes impotence in men and lack of sexual desire in both men and women. These symptoms may persist for an extended period, even after cocaine use has been discontinued.

Cocaine can cause a loss of inhibitions, leading to dangerous sexual practices. Sex is also often “traded” for cocaine. Obviously, increased unsafe sexual activity associated with cocaine use increases the risk of HIV and other sexually transmitted diseases.

Gold, M.S. 1984. *800-Cocaine*. New York: Bantam Books.
Gold, M.S. 1993. *Cocaine*. New York: Plenum Medical Book Co.

Do cocaine users typically use other drugs?

Yes, particularly alcohol. Between 70 percent and 90 percent of cocaine addicts who receive treatment are also alcoholics. A reliance on alcohol or some other depressant or “downer” is almost inevitable for the habitual cocaine user because alcohol decreases the jitters and anxiety caused by cocaine use and reduces the misery of the cocaine “crash.” Therefore, cocaine abusers often develop upper-downer syndromes. It is not uncommon for high-dose cocaine users to consume a fifth of liquor during one day to keep from becoming too “wired” while on a cocaine binge. Another drug commonly used

with cocaine is heroin. Cross-addictions increase medical risks and make withdrawal and treatment even more complicated.

Cohen, S. 1987. The cocaine problems. *Drug Abuse and Alcoholism Newsletter*. San Diego, Calif.: Vista Hill Foundation.
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Smith, D.E., Wesson, D.R. 1985. *Treating the Cocaine Abuser*. Center City, Minn.: Hazelden.

How long can cocaine use be detected by urine and/or blood tests?

The time period during which cocaine use can be detected varies according to the type of test (or “screen”) being used and the limits assigned to each individual test. Generally, cocaine use can be detected for as long as 10 days to five weeks after use by high-dose abusers, and from two to four days in occasional users.

Specifically, cocaine use is detected through the presence of cocaine metabolites, rather than cocaine itself. These metabolites are present after the parent compound has been metabolized by the body. However, many individuals are deficient in the enzymes that metabolize substances like cocaine. In these individuals, actual traces of *cocaine* can be detected by urine or blood screens.

Drug Abuse and Drug Abuse Research. 1991. Rockville, Md.: National Institute on Drug Abuse.
Telephone interview. 1996. Columbia, S.C.: Department of Pharmacology, University of South Carolina School of Medicine.
Warner, E.A. 1995. Is your patient using cocaine? *Postgraduate Medicine*. 98(2):173-180.

How can you tell if someone is using cocaine?

Adolescents are less able than adults to compensate for their drug-induced dysfunction. One of the first signs of drug abuse among teens is that they need more money. Behavioral changes may include increased secrecy, extreme mood swings, loss of interest in school accompanied by tardiness and absences, quitting extracurricular activities and acquiring a new circle of friends. Adults also will need more money and may exhibit similar behavioral symptoms. However, they are often better at hiding a cocaine problem for a longer period.

Physical symptoms of cocaine use include considerable weight loss in a short period; nosebleeds and sinusitis (intranasal use); coughing, black sputum and bronchitis (freebase or crack use); or puncture marks on the arms (IV use).

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In addition, many types of paraphernalia are associated with cocaine use and might indicate that someone is using the drug. Cocaine paraphernalia include pipes (particularly glass ones), lighters and propane fuel lighters, pure grain alcohol, baking soda, clear ammonia, single-edge razor blades, aluminum foil, cut straws, small spoons and small screen-like filters.

Gold, M.S. 1984. *800-Cocaine*. New York: Bantam Books.
Peterzen, D.M., ed. 1986. *Cocaine*. Tallahassee, Fla.: Florida Alcohol and Drug Abuse Association.
Smatt, W.C. 1990. *Cocaine Encounter*. Miami, Fla.: American Sevens Foundation.

Can you get into trouble if someone you know is using cocaine in your home?

Yes. In South Carolina, possession of cocaine is illegal. To escape punishment, you will have to prove the drug is not yours. South Carolina law regarding the possession and distribution of drugs makes it illegal to have, make or intend to distribute any controlled substance, including all forms of cocaine. Penalties vary depending on circumstances but may include a suspended driver's license for up to one year, fines of up to \$200,000 and up to 30 years imprisonment.

South Carolina Code of Laws. 44-53-370, 44-53-375, 56-1-745.

Where can I get more information?

In South Carolina, the Department of Alcohol and Other Drug Abuse Services operates a statewide toll-free telephone line that provides information and assistance on a variety of topics related to alcohol and other drug abuse. The number is **1-800-942-DIAL (3425)**.

The county alcohol and other drug abuse authorities and other public and private service providers offer local information and assistance as well.



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101 Business Park Boulevard • Columbia, SC 29203-9498
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Revised June 2002